



**POLYCOAT
PRODUCTS**

A Division of American Polymers Corp.

Castable Elastomer Systems

Room Temperature Systems, Hot Cast Prepolymers and Curatives



**FORMULATING
SOLUTIONS**



Room Temperature Cast Elastomers

We also provide a wide variety of room temperature products that can be processed at 75-85°F and range from 40A – 75D. These materials do not require post cure heat allowing for simpler and faster processing times. Many of these products can be mixed by hand and/or processed through a variety of machine as well as an extensive variety of spray elastomers and foams. Our chemists have formulated numerous patented polyurethane systems, with over a thousand proprietary formulations, we can also custom blend systems to meet your specific needs and processing parameters.

Pourable Foams

Polycoat Products offers a large variety of flexible, semi-rigid and rigid castable foams for a variety of applications. Our team is able to formulate foams to meet your exact processing needs and specifications.

- **Flexible foams** are available anywhere between three pounds and twenty pounds per cubic foot. Popular for furniture seat cushioning, automotive and motorcycle seats and a variety of other applications, generally water or pentane blown.
- **Semi-rigid foams** that are used in applications where extra stiffness are needed as opposed to flexible foams. Generally, water blown these foams range from between 0.5 to 10 pounds per cubic foot and are used for packaging, movie set and prop design, etc.



- **Rigid foams**, that are very stiff foams ranging from 3 to 30 pounds per cubic foot. Mainly used in applications that require a rigid structure, such as doors, furniture, structure floats etc., mainly use water or Solstice LBA as a blowing agent.

PTMEG Polyether

Polyether and PTMEG Systems are well known for their High-Performance Characteristics making them ideal for demanding applications. They offer a wide variety of advantages such as:

- Superior hydrolytic stability
- High tensile strength, even at low temperatures
- High resilience and rebound
- Excellent mechanical and dynamic properties
- Exceptional impingement abrasion resistance
- Heightened fungal resistance
- Lower viscosity and specific gravity



Popular PTMEG/Polyether Prepolymers

Technical Data (Based on Draw Down Film)						
Product Name	ISOCYANATE	% NCO	VISCOSITY AT 212 °F (POISE)	DUROMETER	WORKING TIME IN MINUTES	CURATIVE USED FOR DATA
PC 30-83	TDI	3.20 – 3.40	6.00 – 9.00	83A ± 3	5	MOCA
PC 30-95	TDI	6.15 – 6.55	1.50 – 2.50	95A ± 3	2	MOCA
PC 30-75D	TDI	9.25 – 9.65	1.70 – 3.00	75D ± 3	1	MOCA
PC 40-85	TDS	3.20 – 3.60	5.00 – 8.00	87A ± 3	12	MOCA
PC 40-90	TDS	3.95 – 4.30	3.00 – 5.00	90A ± 3	10	MOCA
PC 41-95	TDS	6.15 – 6.55	1.50 – 2.50	95A ± 3	6	MOCA
PC 20-85	MDI	6.09 – 6.56	6.00-9.00	85A ± 3	6	1,4 BDO
PC 20-90	MDI	7.12 – 7.64	4.00 – 7.00	85A ± 3	6	1,4 BDO
PC 20-95	MDI	8.65 – 9.05	3.00 – 6.00	95A ± 3	4	1,4 BDO



- **Formliners and Stamp Pads**, polyurethane elastomers and foam molds used in a wide variety of applications. They are great for creating form and texture on concrete

Curatives

Standard:

PC 90-MO – 4,4 Methylenebis (MOCA/MBCA): Diamine. Standard curative for TDI Pre-Polymers, solid at room temperature, slightly yellow in color. Typically melted at 208°F (98°C) into a clear amber colored liquid.

PC 90-14T1 – 1,4 Butanediol (1,4 BDO): Aliphatic diol. Used as a urethane chain extender and as a curing agent for MDI Systems. Provides excellent reactivity and overall stability. Clear viscous liquid, with a molecular weight of 90.12 g/mol.

PC 90-E1 – Ethacure 100 (E100): Aromatic diamine. Excellent Chain extender for elastomeric polyurethanes. Clear light-colored liquid with a molecular weight of 178.28 g/mol.

PC 90-E3 – Ethacure 300 (E300): Aromatic Diamine. Low Viscosity liquid that is ready for use, and processed at room temperature. Clear Amber Colored liquid with a molecular weight of 214.4 g/mol.

Specialty Curatives:

Polycoat products offer a variety of specialty curatives made up of proprietary blends to help you achieve the hardness and physical properties you need. Please ask your Sales representative for more information

Curative effects:

All physical properties of our prepolymer systems are sensitive to changes in curative level and type. These changes can be seen in the physical properties of the material such as hardness, tensile, tear, abrasion, elongation, etc. These levels are often referred to as % Theory.

Physical Properties	Changes
Hardness	GENERALLY UNCHANGED BETWEEN 85-100% THEORY
Tensile Strength	Superior properties between 90-95% theory
Tear Strength	Superior properties between 100-105% theory
Abrasion Resistance	Relatively unchanged between 85-105% theory
Elongation	Superior Properties between 100-105% theory
Service Temperature	-25°F to 150°F -31.7°C to 65°C

Polyesters

Here at Polycoat Products we produce our own aliphatic and aromatic polyesters, giving us more control over the properties and processing of our extensive array of polyester prepolymers. Our aliphatic prepolymers exhibit a longer pot life and shorter demold time, and higher heat resistance at elevated temperatures than our competition. Polyesters offer key advantages such as:

- Greater wear resistance
- Superior tensile strength
- Excellent heat, solvent and oxidative resistance
- High radiation stability
- Exceptional UV, and weathering resistance
- Biodegradability and flame lamination
- Enhanced adhesion to substrate
- Improved load bearing capacity



Popular Polyester Prepolymers

Technical Data (Based on Draw Down Film)						
Product Name	ISOCYANATE	% NCO	VISCOSITY AT 212 °F (POISE)	DUROMETER	WORKING TIME IN MINUTES	CURATIVE USED FOR DATA
PC 51-70	TDI	2.40 – 2.70	8.00 – 12.00	72A ± 3	9	MOCA
PC 51-80	TDI	3.10 – 3.50	7.00 – 10.00	81A ± 3	8	MOCA
PC 51-85	TDI	4.00 – 4.40	7.00 – 10.00	85A ± 3	5	MOCA
PC 51-90	TDI	4.35 – 4.75	6.00 – 8.00	91A ± 3	5	MOCA
PC 50-57	TDI	3.15 – 3.45	11.00 – 13.00	57A ± 3	9	TMP/TIPA
PC 10-88V1	MDI	7.50 – 7.80	5.00 – 10.00	88A ± 3	6	1,4 BDO
PC 11-85V1	MDI	6.74 – 6.98	7.00 – 11.00	84A ± 3	6	1,4 BDO
PC 11-95V1	MDI	9.20 – 9.60	3.00 – 5.00	95A ± 3	6	1,4 BDO
PC 12-85V1	MDI	6.50 – 6.90	7.00 – 10.00	85A ± 3	6	1,4 BDO
PC 14-86V1	MDI	6.44 – 6.98	6.00 – 11.00	85 – 96A ± 3	12	1,4 BDO/HQEE

ENGTHEN OUR FUTURE TOGETHER

Formulating Innovations: State-of-the-Art Manufacturing



We have over 1,000,000 square feet of manufacturing and warehouse space across six chemical facilities in three strategic locations across the United States to store and manufacture large volumes. We ship our premium products globally and welcome inquiries for private label and toll-blending opportunities. Our coatings are found in world landmarks, stadiums, resorts, luxury residential living, and other high-profile projects.

Our Dallas, Texas facility alone houses 44 reactors with the ability to manufacture batch sizes that range from 50-6000 gallons, illustrating our commitment to producing consistently premium products.

Formulating Advantages: Product Advancements

Product formulations are developed and tested to meet national and international stringent standards. Many of our coatings are single-bucket formulations, which reduces the potential for application errors on the job site. Providing user-friendly products is part of the planning when creating product innovations. VOC compliance is also an important component of every product manufactured. Variable VOC systems provide an edge in meeting standards that may be necessary for environmentally-friendly projects.



Formulating Connections: Unprecedented Service



Customer satisfaction is central to our core mission of providing stellar service and dependable, premium products. Feel confident in knowing seasoned veterans who comprise our team understand the difference between boardroom plans and the realities in the field. We sometimes fly out to job sites to lend expertise and provide extra customer support in real time. Choose Polycoat Products and our team becomes part of your team.

Since we believe that chemistry is the key component of our products, our technical sales team constantly collaborates and communicates with our in-house chemists. Together they approach any new trend in the industry with both chemical and field knowledge. Whatever obstacles may occur in the field, we have a team of professionals ready to provide solutions.

Other Product Technologies Manufactured by Polycoat Products:

Liquid Applied Deck Coatings | Epoxy Coatings | Polyurethane Spray Foam | Industrial Coatings Themecoats | Tire Flatproofing | Concrete Repair | and Much More



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**POLYCOAT
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FORMULATING SOLUTIONS

Toll Manufacturing Available | Private Lab Account Inquiries are Welcome | Seeking Experienced Independent Representatives Globally